

to breed. During the migrations it sometimes visits dry or open situations; it breeds, as far as known, only in the most tangled swamps. It is an exquisite but fitful singer; when not singing a silent bird, retiring and sedentary in disposition, eminently terrestrial in habits.

Thus much light on what has been an obscure subject! Important details remain to be worked out, such as the general distribution of the bird in the South, its manner of nesting, etc. It is to be hoped that the near future will see all these points made clear. Meanwhile we may congratulate ourselves on what in effect, if not literally, is the rediscovery of another 'lost' species.

THE HEATH HEN OF MASSACHUSETTS.

BY WILLIAM BREWSTER.

ALTHOUGH the Pinnated Grouse was found rather numerous during the first half of the present century at several localities in the Middle and New England States, no specimens from this region seem to have come under the critical notice of modern ornithologists. Accordingly it is with peculiar pleasure and interest that I have entered into an examination of three examples kindly loaned me by Mr. F. T. Jencks, who received them directly from Martha's Vineyard in the autumn of 1879. Compared with western specimens, they prove to be smaller, with relatively, as well as actually, shorter tarsi; the feathers of the neck-tufts narrower and acutely instead of obtusely lance-pointed; generally redder or rustier coloring above, and much less white or whitish below. The neck-tufts, also, have only from four to five instead of from seven to ten rigid feathers.

It may be pretty safely assumed that at the time of the first settlement of the country, when the Pinnated Grouse ranged more or less uninterruptedly from Eastern Massachusetts to beyond the Mississippi, all the birds found east of the Alleghanies were similar to these island specimens; or, to put case more comprehensively as well as definitely, that the large, light-

colored Prairie Hen of the open grassy plains and prairies of the West originally had a smaller, darker, and redder eastern representative distributed, perhaps rather locally, in scrubby pine and oak tracts, throughout Southern New England and portions of the Middle States. At that time it is not unlikely that the two forms intergraded over such intermediate ground as Western Pennsylvania and Eastern Ohio and Kentucky. However this may have been, they cannot do so now—unless fortuitously, as by reversion—for the last remnant of the eastern stock still lingering on Martha's Vineyard is separated from the extreme eastern confines of the present range of the western bird by an interval of about eight hundred miles.

As these eastern Grouse are distinguishable from their western cousins by well-marked and apparently constant characters,* and as the two birds are now so widely separated geographically that they cannot intermingle, it follows that they may be consistently recognized as distinct if closely related species, for the probability that their separation has been brought about by man's intervention, and within historic times, can have no real bearing on the case. Unfortunately the Prairie Hen must receive the new name, for there is little doubt that the *Tetrao cupido* of Linnæus was really the eastern form. This is indicated by the fact that its habitat is given as "in Virginia"†; moreover, there are good reasons for believing that Linnæus based his diagnosis (which is too brief and general to give much more than generic characters) on Catesby, whose work he cites. If this assumption be granted, the case is freed from all obscurity, for Catesby's figure, although an absurd caricature, was evidently drawn from the eastern bird, while his description mentions several of the characters which separate the latter from the Prairie Hen. Both plate and description were taken from some live specimens which Catesby saw in 1742 "at the right honourable the Earl of Wilmington's at Chiswick, who told me they were natives of America, but from what particular part they came his Lordship knew not." Other considerations aside, it is

* I have examined in this connection upwards of a hundred western specimens in the Boston markets.

† Doubtless a loose statement, as I cannot find that it ever occurred south of Pennsylvania.

hardly possible that in those early days they could have been obtained from anywhere west of the Alleghanies.

Having thus briefly stated a case which is not less remarkable than interesting, I propose to distinguish the forms in question as follows :

Cupidonia cupido (Linn.). HEATH HEN.

SP. CHAR. ♂. Ground-color above light reddish-brown or rusty; beneath rusty-white with transverse bars of dark reddish-brown, the dark color prevailing over the lighter on the exposed portions of the feathers; plumage of tibiae and tarsi brownish-cinnamon thickly mottled with whitish; neck-tufts composed of from three to five narrow, acutely lance-pointed, stiffened feathers, with about the same number of overlapping coverts. Wing, 8.35; tarsus, 1.75; bill, .38 deep, by .55 long from nostril.

♀. Smaller (wing, 7.93); darker and rustier; the dark bars beneath dull black; tail dark clove-brown with numerous fine, irregular, rusty bars.

Habitat.—Martha's Vineyard, Massachusetts; formerly found at various points in Eastern Massachusetts, Southern Connecticut, Long Island, New Jersey, and Pennsylvania; perhaps also Southern New England and the Middle States generally. A woodland species, inhabiting scrubby tracts of oak and pine.

Cupidonia pinnata nov. spec.* PRAIRIE HEN.

SP. CHAR. Ground-color above brownish-ochraceous tinged with gray; beneath white with transverse bars of clear dusky brown, this color *not* prevailing over the lighter tints; tibiae and tarsi brownish-ochraceous *not* mottled with whitish; neck-tufts comprising from seven to ten stiffened feathers, obtusely pointed or even broadly rounded at their tips. Wing, 9.00; tarsus, 2.10; bill, .40 deep by .60 long from nostril.

♀. Smaller, similar in general color and markings, but with the tail barred.

Habitat.—Prairies, from Illinois westward. A bird of the open, breeding on treeless plains, and seldom or never inhabiting timber.

Cupidonia pinnata has been too often and carefully treated under the name *C. cupido* to require further consideration here. The eastern species, however, although destined to bear a familiar name, is practically a new bird. Accordingly I find it necessary to redescribe the *original C. cupido* as follows :

♂ (No. 5330, Coll. W. B., Martha's Vineyard, Mass., Nov. 1879. From F. T. Jencks). Ground-color of upper parts light reddish-brown some-

*Types: ♂ No. 2689, ♀ No. 2690, Coll. W. B.—Vermilion, Dakota, January 20, 1877.

what ochraceous on the rump; under parts dark reddish-brown with some concealed rusty-chestnut on the jugulum, the feathers everywhere, except on the throat, anal region, and under tail-coverts, crossed by from one to five narrow, continuously-transverse bars of pale rusty or white. These bars, except on the sides posteriorly, are narrower than the brown spaces which they separate; hence the darker color predominates. Upper parts diversified by numerous ragged, irregular-shaped markings of blackish-brown or dull black, usually continuous across both webs of the feather, but never embracing its tip; forehead, sides of head above the eye, and entire occiput rusty brown mottled with dull black; crown black, each feather tipped with buff and narrowly margined with rusty; throat and lores immaculate creamy buff; sides of head below the eye of a deeper, more rusty buff, with an isolated patch of dark brown on the cheeks, and a stripe of reddish-brown, extending from the rictus to the ends of the auriculars, passing directly below the eye but leaving the eyelid buff; scapulars with large and very conspicuous terminal spots of white tinged with fulvous; primaries and tail plain brownish or dusky drab, the former with small round spots of pale rusty on their outer webs, the latter tipped narrowly with white; plumage of tibiae and tarsi pale cinnamon-brown; each feather tipped with whitish, giving the parts a mottled appearance. Crissum and under tail-coverts white, the latter with irregular marginal spots of rusty or dull black. Neck-tufts 2.60 long, composed of five narrow, acutely lance-pointed feathers, the under ones plain, the middle two with shaft-lines of buff extending from the tips an inch or less, the exterior (overlapping) ones with much broader central stripes continued nearly to the base of the feathers.

Dimensions.—Wing, 8.35; tail, 3.75; culmen from skull, 1.06; do. from feathers, .70; do. from nostril, .55; depth of bill at nostril, .38; tarsus, 1.75; middle toe, 1.60; its claw, .53.

♀ (No. —, Coll. F. T. Jencks, Martha's Vineyard). Smaller (wing, 7.93); with merely rudimentary neck-tufts; the ground tints more rusty; the dark markings coarser and blacker; the tail dark clove-brown crossed by numerous narrow, irregularly-transverse bars of rusty.

The general differences between this bird and its western representative, *C. pinnata*, are difficult of adequate definition, for the reason that they consist largely in shades of color rather than in markings. Its small size, short tarsus, acutely lance-pointed feathers of the neck-tufts, white-tipped scapulars, general reddish coloration above, and restricted light markings beneath are, however, readily appreciable and apparently constant characters. The bird above described is the *least* extreme in most of these respects. Another before me (♂, No.—, Coll. F. T. J., Martha's Vineyard) actually has the greater part of the breast posteriorly without exposed light bars, the nearly uniform reddish-brown plumage being merely tipped with hoary. This bird is also peculiar in having the neck-tufts dull brownish-chestnut.

The female above described differs more from females of *C. pinnata* than do eastern from western males. The under parts (except the crissum and tail-coverts) are barred heavily with dull black on a rusty orange ground. This rusty suffuses the lighter portions of the plumage elsewhere, even tingeing the cheeks and throat.

The Heath Hen (I use the vernacular name by which it was known to our forefathers) is still common on Martha's Vineyard, where it is mainly, if not exclusively, confined to the woods, haunting oak scrub by preference, and feeding largely on acorns. Being strictly protected by law, but few are probably killed. I am told by one of the Boston marketmen, however, that he has had as many as twenty from the 'Vineyard' in a single season. He also says that they average nearly a pound less in weight than western specimens, and on this account do not sell as readily. The bird is not found on the neighboring island of Naushon, despite statements by recent writers to that effect, nor is there any good evidence that it ever occurred there. There is also no reason to believe that the stock on Martha's Vineyard has been vitiated by the introduction of western birds. It is simply the last remnant of a once more or less widely-distributed race, preserved in this limited area partly by accident, partly by care. According to the best testimony available, the colony is in no present danger of extinction.

PRELIMINARY NOTES ON SOME BIRDS OBTAINED IN ARIZONA BY MR. F. STEPHENS IN 1884.

BY WILLIAM BREWSTER.

MR. F. STEPHENS has kindly allowed me to examine and report on some birds selected from a large collection made by him in Arizona in 1884. As the opportunity comes too late to admit of more than a brief announcement in this number of 'The Auk,' I give only the more important results, reserving the remainder for a future occasion.